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United States Patent [19][11] **Patent Number:** **5,237,486****LaPointe et al.**[45] **Date of Patent:** **Aug. 17, 1993****[54] STRUCTURAL FRAME FOR PORTABLE COMPUTER**

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[52] **U.S. Cl.** **361/681; 361/728; 361/687; 361/684; 361/818**

[58] **Field of Search** **364/708; 361/380, 427, 361/383, 429, 386-389, 390-395, 399, 424; 174/35 R**

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[57] ABSTRACT

A metal frame is fabricated from magnesium alloy and all the main components of the computer, including the logic board, the hard disk drive, the keyboard, the upper and lower halves of the computer's case, and the pivoting display screen are all directly attached to the frame. The frame thus offers a method for constructing a personal computer which will have greatly improved shock resistance, integrated electromagnetic isolation, and structural strength, without increasing the weight of the completed computer in any significant fashion. Additionally, by means of a cooling flange fabricated as part of the frame, the central processing unit of the portable computer is thermally connected to the frame, which then acts as a heat-sink for the central processing unit, greatly improving its reliability.

2 Claims, 2 Drawing Sheets

